CASE STUDY

Slope Reinforcement | Reinforcement & Drainage | Leisure Bay Retaining Wall, Pretoria

July 2014

Client: Zone Earth Development
Contractor: Zoned Earth Tshwane
Product:
- Flo-Drain™ 2m | 60m
- Flo-Drain™ 1.65m | 90m
- RockGrid PC® 100/100 | 200m
Consultant: GFC Consulting
Rep: Christiaan van Wyk

Problem

The new Leisure Bay development which consists of a 56-unit residential complex, was built in a cutting. This resulted in the need for a retaining wall which was crucial to secure a three to four metre embankment left by the excavation.

Having noticed a significant amount of water seepage from the embankment, the need to reinforce the fill material behind the retaining wall became evident. Flo-Drain™ and RockGrid® PC were recommended as the ideal products to solve the problem.

Solution

For reinforcement and support behind the retaining wall, RockGrid® PC 100/100 was installed horizontally in the layer works of the backfill material. This composite, reinforcing geotextile consists of a nonwoven layer in conjunction with high tenacity, bi-axially orientated multi-filament polyester yarns, the combination of which guarantees its unique characteristics. The nonwoven layer provides not only protection to the high tenacity yarns but vital in-plane drainage capacity to relieve pore water pressure in the fill material.

Benefits

Compared to woven fabrics, polyethylene grids or polypropylene grids, the high tensile modulus of RockGrid® PC provides superior reinforcement characteristics with minimum creep deformation. It may be installed wherever low-bearing capacity soils are encountered and, being manufactured in South Africa, RockGrid® PC is more economical than any other imported alternative.